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AUTHOR Butler, Richard P.; And Others
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ABSTRACT

The purpose of this report is to describe, evaluate, and validate a pilot assessment center (AC) established in the Center for Leadership and Personal Development at the U.S. Military Academy to develop cadets on job skills needed by newly commissioned officers in the U.S. Army. The AC programs employ a leadership evaluation development method whereby cadets participate in a variety of simulations of a second lieutenant's job. During the course of the simulations, trained assessors observe and evaluate each cadet's performance, and later provide feedback to each participant regarding strengths and weaknesses on important military skills. To evaluate the program, 18 cadets and seven assessors completed anonymous questionnaires. In addition, role players' comments were obtained, and oral feedback was solicited from cadets and assessors during and after the pilot. Data were also gathered to validate the AC for developmental purposes, in terms of both concurrent and content-related validities. Results of the evaluation and validation are discussed. (BW)

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Description, Evaluation, and Validation of a Pilot Developmental Assessment Center in a Military - Educational Environment[1]

Richard P. Butler, William L. Wilson, and Robert F. Priest

U.S. Military Academy

[1]Any conclusions in this report are not to be construed as official U.S. Military Academy or Department of the Army positions unless so designated by other authorized documents. Paper presented at the 26th Annual Conference of the Military Testing Association, Munich, Germany, November, 1984.

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Description, Evaluation, and Validation of a Pilot Developmental Assessment Center in a Military - Educational Environment[1]

Richard P. Butler, William L. Wilson, and Robert F. Priest
U.S. Military Academy

During the past fifteen years the assessment center (AC) method has been used successfully to select managerial personnel (Schmitt et al., 1984). The method also has been used to contribute to developmental efforts aimed at changing behavior, but far less frequently than as a selection device (Thornton & Byham, 1982). Reports evaluating AC programs aimed at serving developmental purposes are virtually nonexistent (Boehm, 1982a). The purpose of the current report is to describe, evaluate, and validate a pilot AC established in the Center for Leadership and Personal Development at the U.S. Military Academy (USMA) to develop cadets on job skills needed by newly commissioned officers in the U.S. Army. The aim of the AC was to supplement USMA's existing leadership/management programs by giving cadets practice and feedback on skills needed by junior officers (Butler, 1984).

DESCRIPTION

Definition. Our AC is a leadership evaluation and development method whereby cadets participate in a variety of simulations of a second lieutenant's job. During the course of the simulations, trained assessors observe and evaluate each cadet's performance, and later provide feedback to each participant regarding his strengths and weaknesses on important military skills. Individual development programs are then recommended to provide continued growth.

Resources. The following paragraphs summarize the major resources used to implement the AC.

Cadets. Sixty-six cadets served as participants. Some were considered high on leadership performance, some in the middle, and some marginal (but not deficient), as measured by USMA's leadership performance rating system - ratings by tactical officers, academic instructors, immediate cadet supervisors and cadet supervisors next removed, and cadets of the next senior class. The individual ratings are combined in weighted averages to provide ratings for each cadet on six performance criteria and to provide the basis for an overall rating.

Assessors. The assessors were 31 Army officers who underwent a training program which ranged from 15 to 30 hours, with roughly two thirds in-class and one-third out-of-class. The training centered on the primary assessor duties of recognizing, recording, classifying, and evaluating behavior, as well as data integration and feedback techniques.

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Role Players. The counseling simulation required someone to play the role of a sergeant who recently had a drop-off in performance. Throughout the course of the AC, eight different NCOs played the sergeant's role. The only other simulation requiring a role player was the oral presentation to the company commander. Several of the officer-assessors played this role. All role players underwent a role-player's training session.

Leadership Assessment Program (LAP). The LAP is a complete AC package developed by TRADOC-ROTC and Development Dimensions Int., the consultant. The LAP is meant to improve the Army's precommissioning selection, training and retention programs. It consists of manuals, video tapes, twelve identified skills, and five simulations. The manuals and video tapes were used as assessor training aids and reference sources. The 12 skills were oral communication, written communication, oral presentation, influence, initiative, sensitivity, planning/organizing, delegation, administrative control, problem analysis, judgment, and decisiveness. The five simulations consisted of a 21-item in-basket, assigned role leaderless group discussion, oral presentation, counseling, and scheduling exercise.

Procedure. Eleven groups of six cadets each participated in the AC. A five point scale ranging from "1" (much less than acceptable) to "5" (much more than acceptable) was used to evaluate cadet performance on each of the 12 skills. Cadets were rated relative to the requirements of the target-level position (new second lieutenants), and not relative to each other. For each group, the three assessors met to integrate the data they had gathered from observing and scoring the simulations, and each assessor then wrote final reports on two cadets. The final report, which described how the cadet performed on each of the 12 skills and recommended developmental opportunities, was given to each cadet by an assessor during a one-hour feedback session.

At the conclusion of the oral feedback session, the first 18 cadets to be assessed were given a questionnaire to obtain their reactions to the AC. The cadets completed the questionnaire in the privacy of their own rooms and returned it anonymously to the Center for Leadership and Personal Development. The first seven assessors also completed a questionnaire giving their evaluations of the AC. In addition, role players' comments were obtained, and oral feedback was solicited from cadets and assessors during and after the pilot. Together these data constituted the subjective evaluation section of this report.

EVALUATION OF ASSESSMENT CENTER

Cadet Questionnaire Results. Cadet responses were very favorable. In general, they considered the AC to be a valuable experience, and to have high value for diagnosing strengths/weaknesses, giving a realistic view of the junior officer job, and serving as leadership/management training. They also felt that the evaluations made by the assessors were helpful and that assessors handled the feedback session very well. The vast majority of cadets stressed that the major benefit was that they received knowledge of their leadership strengths and weaknesses and advice on how to develop their talents from an objective source. Cadets also felt that the AC should be expanded so that more cadets could participate because it added something valuable to USMA's leadership training program.

Assessor Questionnaire Results. Assessors considered their assessor training program to be a valuable experience for their own personal and professional development. They also perceived the twelve dimensions to be very accurate representations of junior officer job requirements. Like cadets, assessors attributed high value to the AC for diagnosing cadet strength and weaknesses, giving realistic previews of junior officer jobs, and serving as leadership/management training for cadets. They foresaw additional benefits in the areas of evaluating and counseling subordinates in future assignments. Assessors also believe that the AC has a role to play at USMA, and indicated that it might fulfill a number of functions: a diagnostic tool, selection for chain of command positions, assisting cadets on leadership development, aiding instruction, and supplementing the current leadership rating system.

Role Player Comments. The NCOs who played the sergeant's role in one of the simulations were unanimous in their high praise of the program, indicating that the AC allowed for an increase in cadet interaction with NCOs, something that cadets needed.

Oral Feedback from Assessors and Cadets. During the course of the AC, informal conversations took place between the program administrators and the assessors and cadets. The assessors and cadets expressed very postive sentiments toward the AC, but did bring forth some concerns. The chief concern of the assessors was that during the course of the AC they not only had to perform assessor duties, but also were responsible for their regular jobs. They also expressed concern over the lack of sound follow-on developmental programs for some skills. Cadets, during the initial stages of the AC, were concerned over the amount of time it would take. However, while this concern did not totally vanish, it seemed to become much less salient as the AC progressed.

VALIDATION

Boehm (1982a) noted that there is virtually no research validating ACs for developmental purposes. That is, research has not determined if participating in a developmental AC leads to growth and development as a result of the experience itself. What is needed are data on changes in the job performance of participants after the AC. "Hard" data of this nature are being gathered to validate the AC discussed in this paper, but will not be available for approximately two years. Thus, this section of the report of will rely upon the two basic strategies of concurrent and content-related validities. While these strategies, along with criterion-related validity, traditionally have been used to validate ACs aimed at selecting supervisors and managers, they can also be used to validate developmental ACs.

Concurrent Related Validity. The 66 cadet participants were divided into three groups based on USMA's traditional method of assessing leadership performance. The cumulative leadership rating of cadets with a score of less than 2.00 were considered low in leadership performance, cadets with ratings greater than 1.99 but less than 3.00 were rated average, and those with ratings greater than 2.99 were considered high in leadership. We expected the group high in cadet leadership to perform best on junior officer skills measured by the AC, and the group lowest in cadet leadership to perform worst.

Table 1 presents AC performance information of the three subgroups of cadets. Using one-way analysis of variance to test for differences in the overall averages of the 12 skills for the three groups indicated a signifi cant difference ($F=6.15$, $df=2/63$, $p<.01$). A posteriori contrasts showed that the group highest in cadet leadership performed significantly better than the other two groups, and that the lowest and middle groups were not significantly different, thus indicating partial support for concurrent validity.

Table 1

Means and Standard Deviations on Twelve Skills

	Cadets Lowest in Military Leadership		Cadets in Middle in Military Leadership		Cadets Highest in Military Leadership		
Junior Officer Skills	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	F
Oral communication	3.06	.66	3.44	.87	3.88	.80	5.37**
Oral presentation	3.00	1.06	3.40	.87	4.12	.80	8.48**
Written communication	2.88	.60	3.04	.84	3.71	1.16	4.95**
Initiative	3.18	.88	2.92	.91	3.62	.92	3.75*
Sensitivity	2.82	.73	3.16	.80	3.25	.74	1.67
Influence	2.82	.95	3.12	.97	3.42	1.10	1.72
Planning & organizing	3.18	.64	2.96	1.06	3.42	.97	1.46
Delegation	2.88	.93	2.80	1.12	3.25	1.15	1.15
Administrative control	2.18	.81	2.48	.96	2.67	1.20	1.14
Problem analysis	2.65	.61	2.72	.79	3.21	.83	3.54*
Judgment	2.82	.81	2.84	.62	2.96	.91	0.20
Decisiveness	3.35	.86	3.24	.83	3.46	.88	0.40
Overall Average	2.90	.40	3.01	.49	3.41	.58	6.15**
N	17		25		24		

$df = I_{2,63}$

**$p < .01$

*$p < .05$

In addition, we obtained a zero-order correlation of .44 ($p<.01$) between the cadet leadership rating and the overall AC average for the 66 cadets. The multiple correlation using the cadet leadership rating as the dependent variable and the 12 skills as the independent variables was .67 ($p<.01$). Thus, certain aspects of junior officers skills, such as problem analysis and communication skills, are closely related to the way USMA evaluates cadet leadership performance. Other aspects, such as sensitivity, influence, planning and organizing, judgment and decisiveness are not as closely related.

Content-Related Validity. As Boehm (1982b) points out, content-related validity is a demonstration of a direct relationship between what is being measured by an AC and the requirements of the target job. It rests on a thorough job analysis. The job analysis and follow-on work leading to the identification of dimensions and the development of the simulations and the assessor training program were conducted by TRADDOC-ROTC, the Army's action office, and Development Dimensions, Int., the consultant. The information in this section pertains to their work which was reported by Roger[illegible], Hood, & Wellins (1982).

A comprehensive job analysis of the targeted position (second lieutenant) was performed. Specific techniques used to collect job analysis data included: 1) indepth interviews with a representative sample of incumbent second lieutenants; 2) indepth interviews with representative samples of captains currently supervising second lieutenants; and 3) a review of all pertinent data concerning second lieutenant positions within the Army, including job descriptions and past analyses of junior officer positions. The data collected were integrated and analyzed to develop a tentative list of dimensions necessary for successful performance in the second lieutenant positions. This tentative list of dimensions was evaluated by a large sample of captains representing all the major career fields within the United States Army. From an analysis of the responses a final list of dimensions most critical to successful performance at the second lieutenant level was identified. The final dimensions which evolved from this extensive job analysis procedure were common to the typical managerial dimensions found for industrial or governmental supervisory positions. However, some of the behaviors that were included under each of these dimensions were obviously unique. The final list of 12 dimensions can be found in an earlier section of this report.

The five simulations (listed earlier) which were developed provided an extensive look at all the dimensions while, at the same time, simulated the major portions of the typical responsibilities handled by second lieutenants.

Extensive field testing was undertaken to insure that the program was content valid. Four field tests showed that a number of modifications in the assessor training program and simulations were needed, but that the reactions of assessors and assessees in the field tests were extremely positive regarding the authenticity of the simulations and the benefits accruing to assessees. Several reliability tests of the part in-class and part out-of-class assessor training showed it to yield scores as reliable as the traditional method of assessor training conducted only in-class.

Thus, the research indicates that this developmental AC has a high degree of content validity for representing the major dimensions of the second lieutenant job. Furthermore, the concurrent validity study shows that individuals who perform well as cadets, in terms of the cadet performance rating, also tend to have already developed many of the skills needed by second lieutenants and, were still between one and two years away from commissioning as second lieutenants. We are not surprised that the correlation is a moderate .44 between cadet leadership performance and overall AC performance, since the AC reflects twelve dimensions and the cadet performance rating system only reflects six dimensions (Priest, 1982).

It will be several years until we can gather all the criteria necessary for a complete validation. In the meantime, USMA will continue to explore the benefits of the AC, on a experimental basis, as a method to help cadets prepare for their roles as second lieutenants. Furthermore, we shall continue to seek improvement and acceptability, while maintaining quality, by reducing assessor training time, streamlining recording forms, computerizing the final written report, and improving our follow-on developmental program.

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